

GE 159 Plastics Avenue Pittsfield, MA 01201

Transmitted Via Overnight Delivery

June 24, 2005

Mr. William P. Lovely, Jr.
United States Environmental Protection Agency
EPA - New England (MC HBO)
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: Newell Street Area II (GECD450) Supplemental Information Package

Dear Mr. Lovely:

On March 3, 2005, the General Electric Company (GE) submitted the Final Removal Design/Removal Action Work Plan for Newell Street Area II (Final Work Plan) to the United States Environmental Protection Agency (EPA). EPA conditionally approved the Final Work Plan in a letter to GE dated May 12, 2005. Subsequent to the submittal of that document, GE, EPA, and the Natural Resource Trustees for the GE/Housatonic River Site (Trustees) exchanged various written comments and responses. Those comments were addressed in GE's Addendum to the Final Work Plan (Addendum) submitted to EPA on May 25, 2005. EPA approved the Addendum in a letter to GE dated June 9, 2005, while the Trustees provided their concurrence in a letter dated June 10, 2005.

The Final Work Plan stated that, following GE's selection of a Remediation Contractor, GE would submit a Supplemental Information Package to EPA to provide certain Contractor-specific information and implementation details that were not available at the time that the Final Work Plan was submitted. This letter and its attachments provide the supplemental information.

#### Contents of Supplemental Information Package

Section 9 of the Final Work Plan indicated that the Supplemental Information Package would include the following information:

- Identification of and contact information for the selected Remediation Contractor;
- Copies of the Remediation Contractor's pre-mobilization submittals (i.e., Operations Plan, Health and Safety Plan [HASP], and Contingency Plan);
- Additional excavation stabilization controls/procedures associated with excavation adjacent to support towers for overhead power lines (if identified);
- Identification of backfill sources and locations, as well as, analytical data collected from these sources;

- A tree inventory and tree planting plan for soil removal areas not subject to the placement of an engineered barrier;
- Information regarding the scope of proposed restoration activities within and adjacent to the Intermittent Standing Water Area on Parcels J9-23-4 and J9-23-5; and
- Additional information regarding natural resource restoration/enhancement activities proposed by GE for the Newell Street parking lot area.

Additional details regarding each of the above-listed items are provided below.

#### Selection of Remedial Contractor

GE has selected D.A. Collins Environmental Services (D.A. Collins) of Mechanicville, New York as its Remediation Contractor for Newell Street Area II. Contact information for D.A. Collins is provided in Section 2.1 of the Health, Safety & Contingency Plan (Attachment A).

#### Remediation Contractor's Pre-Mobilization Submittals

D.A. Collins has provided several pre-mobilization submittals prior to initiating response actions within Newell Street Area II. Copies of D.A. Collins' Health, Safety & Contingency Plan and Operations Plan are provided in Attachments A and B, respectively.

#### Excavation Stabilization Controls/Procedures

Based on conversations with Northeast Utilities, D.A. Collins will limit excavations in the vicinity of the high tension towers to one foundation support at a time. A maximum of one exposed foundation support per tower will be allowed at any given time. Backfilling activities around the exposed support will be conducted prior to initiating excavations in the vicinity of other supports. A copy of Northeast Utilities' protocol for "Operation of Equipment Under and Adjacent to NU Lines on Rights-of-Way" is provided in Attachment C.

#### **Backfill Information**

D.A. Collins' proposed sources for soil fill and topsoil are Hurley's Pit located in Washington, Massachusetts and the Lane Construction Plant located in Lenoxdale, Massachusetts. Analytical results for samples collected within these proposed sources will be provided to EPA in a separate letter once received by GE from the laboratory.

#### Tree Inventory and Planting Plan

On behalf of GE, White Engineering, Inc. (White) performed a tree inventory within the soil removal areas (excluding areas where an engineered barrier will be installed). Utilizing the results of this inventory, White developed a Tree Planting Plan to be implemented in these same areas. The Tree Inventory and associated Planting Plan are provided in Attachment D.

#### Proposed Restoration Activities on Parcels J9-23-4 and J9-23-5

On behalf of GE, White conducted a wetlands survey within the Intermittent Standing Water Area on Parcels J9-23-4 and J9-23-5. The results of this survey are provided in Attachment D and indicate that this area is not considered a wetland. Based on these results, this area will be restored consistent with adjacent areas as described in the Final Work Plan.

#### Natural Resource Restoration/Enhancement Activities

Additional information regarding the scope of natural resource restoration/enhancement activities was provided in the May 25, 2005 Addendum to the Final Work Plan.

Please feel free to contact me if you have any questions regarding this letter or the attached supplemental information.

Sincerely.

And rew T. Silfer /Acc Andrew T. Silfer, P.E.

GE Project Coordinator

ACC/csc

Enclosures

V.\GE\_Pirtsfield\_CD\_Newcll\_St\_Area\_IT\Reports and Presentations\SIP\39452196.DOC

cc: Dean Tagliaferro, EPA Tim Conway, EPA

Holly Inglis, EPA

Rose Howell, EPA\*

K.C. Mitkevicius, USACE

Susan Steenstrup, MDEP (2 copies)

Anna Symington, MDEP\*

Robert Bell, MDEP\*

Thomas Angus, MDEP\*

Linda Palmieri, Weston (2 copies)

Nancy E. Harper, MA AG\*

Dale Young, MA EOEA

Michael Chelminski, Woodlot

Mayor James Ruberto, City of Pittsfield

Pittsfield Department of Health

Jeffrey Bernstein, Bernstein, Cushner & Kimmell

Teresa Bowers, Gradient

Michael Carroll, GE\*

Richard Gates, GE

Roderic McLaren, Esq., GE\*

James Nuss, BBL

James Bieke, Goodwin Procter

Barbara Charest, Northeast Utilities Service Co.

Charles Nicol, Northeast Utilities Service Co.

Paul Dowd, Western Mass. Electric Co.

Denise Vogel, Western Mass. Electric Co.

Public Information Repositories

GE Internal Repository

<sup>\*</sup>cover letter only

# **Attachments**



# Attachment A

# D.A. Collins Environmental Services – Health, Safety & Contingency Plan



#### SUBMITTAL FOR:

# GENERAL ELECTRIC COMPANY NEWELL STREET AREA II PITTSFIELD, MA

# HEALTH, SAFETY AND CONTINGENCY PLAN

#### SUBMITTED TO:

GENERAL ELECTRIC COMPANY

Mr. Richard W. Gates 159 Plastics Avenue Pittsfield, Massachusetts 01201 BLASLAND, BOUCK & LEE, INC.

Mr. Andrew C. Corbin 6723 Towpath Road Syracuse, New York 13214

#### SUBMITTED BY:

D.A. COLLINS ENVIRONMENTAL SERVICES

101 Route 67, PO Box 191 Mechanicville, New York 12118-0190 Ph. 518-664-9855 / Fax 518-664-9609



A Proud Member of the D.A. Collins Companies

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#### 1.0 Introduction

This Health, Safety, and Contingency Plan (HASP) has been developed in order to address the PCB soil remedial activities at the Newell Street Area II Site in Pittsfield, Massachusetts.

A copy of this HASP will also be made available to all personnel for review. All employees will complete a Health and Safety Plan Review Acknowledgement form to verify they have reviewed this plan and a copy of the form is attached as Exhibit 1. All subcontractors involved with remediation activities are required to certify that their employees have received all applicable training, medical exams, and are capable of respirator usage. The Contractor Occupational Safety and Health Certification form is attached as Exhibit 2. Prior to starting activities at the site all employees and subcontractors will also be required to fill out a Field Medical Data Sheet which is attached as Exhibit 3.

All on-site personnel involved with the remediation project will attend a pre-construction briefing on the chemical and physical hazards associated with the site. The initial health and safety briefing will consist of the following information:

- Names of personnel and alternates responsible for site safety and health.
- Identification of known hazards present on the site.
- Safe use of engineering controls and equipment on-site.
- Work practices by which the employee can minimize risks from hazards.
- Selection, use, care, and maintenance of Personal Protection Equipment (PPE).
- Site control procedures.
- Site decontamination procedures.
- Standard operation safety procedures.
- Review of all work plans and related safety protocol.

Documentation of all training, fit test and medical monitoring certificates will be maintained in the offices of D.A. Collins and be available to the Health & Safety Officer (HSO).

A daily tailgate meeting will be conducted prior to starting any remediation activities. The topics covered will include a reminder of site hazards, target activities for the day's work, potential changes in observed exposure levels, staff changes (e.g., due to illness) and responsibilities.

# 1.1 Scope and Applicability

The purpose of the HASP is to identify, evaluate and control health and safety hazards, and provide for emergency response for operations at the site during remediation activities. This plan applies to all site employees and visitors under the direction of D.A. Collins who have the potential to be exposed to the contaminated materials.

This health and safety plan covers the following site activities:

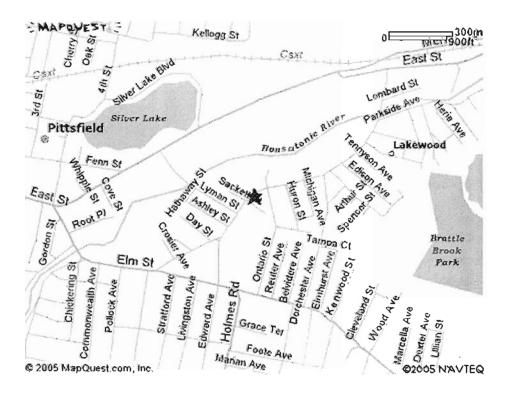
- Site preparation
- Clearing and grubbing
- Monitoring well decommissioning

- Temporary shutdown/relocation of certain components of an existing NAPL collection system
- Air monitoring and dust control measures
- PCB impacted soil excavation, handling, treatment, and disposal
- Earthwork including excavation, backfilling, grading, and compaction
- Engineered barrier cap construction
- Construction water management and water treatment operations
- Equipment decontamination
- Site restoration
- Performance of natural resource restoration/enhancement activities
- Various ancillary support activities

All personnel on-site shall be informed of the site emergency response procedures and any potential fire, explosion, health, or safety hazards of the operation. This HASP summarizes those hazards and defines protective measures planned for the site. All personnel prior to working at the site must review this plan.

The HASP guidelines and requirements are based upon actual field activities and are subject to revision upon subsequent discoveries regarding potential hazards at the Site. All fieldwork will be performed to comply with the Occupational Safety and Health Administration (OSHA) 29 CFR 1910 and 1926.1.3 Site Description and Contaminant Characterization

#### 1.2 Site Location



#### 1.3 Site Characterization

The Newell Street Area II site was created in the early 1940s, when some Housatonic River oxbows and low-lying areas were separated from the active course of the river and subsequently filled with various materials from GE and other unknown sources. The site comprises primarily a parking lot and wooded areas, one of which contains electrical towers. It is currently vacant and access is very limited.

The main compounds and environmental medium of concern at the site are PCBs in soil. Prior to remediation concentrations of PCBs in soil at Newell Street Area II ranges from non-detect to approximately 43,000 parts per million (ppm).

# 2.0 Health and Safety Organization

## 2.1 Contact Information & Emergency Numbers

The project organizational structure and key project personnel are indicated below. Personnel assigned to perform the work described for this work assignment are as follows:

NAME	COMPANY	RESPONSIBILITIES	PHONE NUMBERS
David	D.A. Collins	Drainet Managay	518-664-9855 (office)
MacDougall	Environmental	Project Manager	518-365-3189 (mobile)
Steve Bullock	D.A. Collins	Cita Comprintendent	518-376-5363 (mobile)
Steve Bullock	Construction	Site Superintendent	TBA (trailer)
Coott Cooting	D.A. Collins	Health & Safatu Officer	518-664-9855 (office)
Scott Serviss	Environmental	Health & Safety Officer	518-378-9619 (mobile)
Benjamin Shaw			518-584-2475 (office)
&	D.A. Collins	DAC Safety Department	518-857-9210 (mobile)
Bill Bord			518-484-1855 (pager)
Richard W.	General Electric	GE Project Manager	413-448-5909 (office)
Gates	Companies		TBA (mobile)
A 1 C . 1	Displand Davids & Los	CE's Representative	315-446-2570 (office)
Andrew Corbin	Blasland, Bouck & Lee	GE's Representative	TBA (mobile)
Fire	Pittsfield Fire Dept.	Dial 911 to report a fire	
Police	Pittsfield Police Dept.	Dial 911 to report emergencies	
Poison Control			800-366-6997
National			800-424-8802
Response Center			000-424-0002
Hospital	Berkshire Medical	725 North Street, Pittsfield,	413-447-2000
(See Exhibit 4)	Center	MA 01201	413-447-2000

# 2.2 Responsibility and Authority of Key Personnel

The responsibility and authority of key personnel relative to the implementation of this HASP are described below.

#### Project Manager

- Verify that the project is performed in a manner consistent with the HASP, Operations Plan and technical specifications.
- Temporarily suspend field activities if the health and safety of personnel are endangered, pending further consideration by the Director of Safety.

#### Project Superintendent

- Insure that all personnel are made aware of the HASP.
- Coordinate work activities in compliance with the HASP.
- Temporarily suspend field activities if the health and safety of personnel are endangered, pending further consideration by the Director of Safety.

#### Director of Safety

- Verify compliance with the HASP by all Site personnel.
- Perform site inspections and audits on a routine basis to verify compliance with the HASP.
- Coordinate with the Health and Safety Officer on health and safety matters.
- Temporarily suspend field activities if the health and safety of personnel are endangered, pending further consideration by the Health and Safety Officer.
- Report all infractions of the HASP to the Project Manager.

#### Site Health and Safety Officer

- Direct health and safety activities on-site in accordance with the HASP.
- Educate site personnel by:
  - 1) Daily toolbox safety meetings
  - 2) Posting daily safety tips
  - 3) Coordination of weekly safety meetings
  - 4) Safety training of site personnel
  - 5) Leading by example
- Report safety related incidents or accidents to the Project Manager.
- Implement the HASP.
- Maintain health and safety equipment on-site, as specified in the HASP.
- Perform health and safety activities on-site, as specified in the HASP, and report results to the Project Manager.
- Maintain documentation of health and safety measures taken at the Site including:
  - 1) Communication of the HASP;
  - 2) Levels of protection and required upgrades;
  - 3) Environmental monitoring results;

- 4) Incident reporting; and
- 5) Upgrade or downgrade levels of protection in response to field conditions outlined in the HASP.
- Monitor the ambient air with a photo-ionization detector (PID), a combustible gas meter, and an ambient air sampling system and report this information to the Owner and the Engineer.
- Temporarily suspend field activities if health and safety of personnel are endangered, pending further consideration by the Director of Health and Safety and the Project Manager.
- Report all infractions of the HASP to the Project Manager.
- Interface with the Project Manager as may be required in matters of health and safety.
- Monitor compliance with the approved HASP.
- Assist the Project Manager in maintaining health and safety equipment for the Project.
- Verify personnel working on the Site have completed medical surveillance and health and safety training.
- Direct personnel to change work practices if they are deemed to be hazardous to health and safety of personnel.
- Remove personnel from the project if their action or condition endangers their health and safety or the health and safety of co workers.
- Direct health and safety related comments to management personnel for resolution and or correction.
- Monitor Site conditions for implementation of the Health and Safety Plan by all Subcontractors and visitors.
- Enforcement of D.A. Collins Policies and Procedures.

# 3.0 Risk Analysis

The Newell Street Area II known contaminants consists of mainly of polychlorinated biphenyls (PCBs), and other constituents listed in Appendix IX of 40 CFR 264. Constituents in soil at Newell Street Area II requiring response actions consist of PCBs; Dioxins/furans; certain polycyclic aromatic hydrocarbons (PAHs); and lead.

#### **PCBs**

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact

Symptoms: Irritation eyes, chloracne; liver damage; reproductive effects; [potential occupational carcinogen]

Target Organs: Skin, eyes, liver, reproductive system

Short-Term Exposure: NA

Long-Term Exposure: Repeated or prolonged contact with skin may cause dermatitis. Chloracne is the most visible effect. The substance may have effects on the liver. Animal tests show that this substance possibly causes toxic effects upon human reproduction.

#### **PAHs**

PAHs are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances. Two representative PAHs (naphthalene, 2-methylnapthalene) are included in this HASP to provide general safety guidelines for PAH contamination. The actual PAHs found at the Newell Street site may vary and will be further characterized as necessary at the HSO's discretion.

Exposure Routes: Inhalation, skin absorption, ingestion, or skin and/or eye contact.

Target Organs: Lungs, stomach, skin

Short-Term Exposure: Animal studies have shown harmful effects the skin, body fluids, reproductive system and ability to fight diseases. But these effects have not been seen in people.

Long-Term Exposure: Animal studies have shown harmful effects the skin, body fluids, reproductive system and ability to fight diseases. But these effects have not been seen in people. Some PAHs may be carcinogenic.

#### Lead

Exposure Routes: Inhalation, ingestion, skin and/or eye contact.

Symptoms: Lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypotension.

Target Organs: Eyes, gastrointestinal tract, central nervous system, kidneys, blood, and gingival tissue.

Short-Term Exposure: The substance may cause effects on the gastrointestinal tract, blood, central nervous system and kidneys, resulting in colics, shock, anemia, kidney damage and encephalopathy. Exposure may result in death. The effects may be delayed. Medical observation is indicated.

Long-Term Exposure: The substance may have effects on the gastrointestinal tract, nervous system, blood, kidneys and immune system, resulting in severe lead colics, paralysis of muscle groups of the upper extremities (forearm, wrist and fingers), anemia, mood and personality changes, retarded mental development, and irreversible nephropathy. May cause retarded development of the new-born. Danger of cumulative effect.

#### Dioxins / Furans

Dioxins and furans are aromatic hydrocarbons that can have from one to eight chlorine constituents. There are 75 Dioxins and 135 Furans substituted forms (congeners) for a total of 210. The most toxic and consequently the most extensively studied of the dioxins is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Both the number of chlorine atoms and their position determine the physical and chemical properties, and therefore, the fate and toxicity of a given substituted form (congener). Out of the 210 congeners, only 17 congeners with chlorine are reported to have potential heal effects.

#### The 17 toxic congeners include:

Dioxins: 2,3,7,8-TCDD, 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, 1,2,3,4,6,7,8 – HpCDD; OCDD.

Furans: 2,3,7,8-TCDF;2,3,4,7,8-PeCDF;1,2,3,7,8-PeCDF;1,2,3,4,7,8-HxCDF; 1,2,3,7,8,9,-HxCDF;1,2,3,6,7,8-HxCDF;2,3,4,6,7,8-HxCDF;1,2,3,4,6,7,8-HpCDF; 1,2,3,4,7,8,9HpCDF; OCDF.

Exposure Routes: Inhalation, skin absorption, ingestion, skin and/or eye contact.

Symptoms: Irritation eyes, allergic dermatitis, chloracne; porphyria; gastrointestinal disturbance; possible reproductive, teratogenic effects; in animals; liver, kidney damage; hemorrhage; [potential occupational carcinogen].

Target Organs: Eyes, skin, liver, kidneys, reproductive system.

**Short-Term Exposure:** No information available.

Long-Term Exposure: No information available.

The chemical and physical hazards are described in the following sections.

# 3.1 Chemical and Physical Hazards

A hazard analysis has been prepared for the site contaminants of concern. The hazard analysis utilizes exposure and toxicity information generated by the Occupational Safety and Health Administration, American Conference of Governmental Industrial Hygienists, the National Institute for Occupational Safety and Health, the National Toxicology Program, the International Agency for Research on Cancer and accepted industry data. Listed below are the chemical and physical hazards associated with PCBs (the primary contaminants of concern), and other non-PCB constituents requiring response action at Newell Street Area II.

**PCBs** 

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire		Powder, carbon díoxíde.
EXPLOSION			
EXPOSURE		Prevent Generation of Mists! Strict Hygiene	
•INHALATION		Ventilation	Fresh air, rest. Refer for medical lattention.
INGESTION	Headache, Numbness	Do not eat, drink, or smoke in work area.	Rest. Refer for medical attention
•SKIN	May be Absorbed! Dry skin. Redness		Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
•EYES			First rinse with plenty of water for several minutes (remove contact lenses if easily possible, then take to a doctor.

Chemical dangers: The substance decomposes in a fire producing irritating and toxic gases.

#### Lead

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Not combustible. Finely divided lead powder is flammable. Gives off unitating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking (if in powder form)	In case of fire in the surroundings: all extinguishing agents allowed.
EXPLOSION	Finely dispersed particles form explosive mixture in air.	Prevent deposition of dust; close system, dust explosion-proof electrical equipment and lighting.	
EXPOSURE		Prevent dispersion of dust! Strict Hygiene! Avoid exposure of (pregnant) women! Avoid exposure of adolescents and children!	In all cases consult a doctor.
INHALATION	Abdominal cramps. Drowsiness. Headaches. Nausea. Vomiting. Weakness. Pallor. Hemoglobinuria. Collapse.	Ventilation (not if powder). Avoid inhalation of fine dust and mist. Local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
INGESTION	Abdominal cramps (further see Inhalation).	work area. Wash hands before	Rinse mouth. Induce vomiting (Only in conscious person!). Refer for medical attention.
•SKIN	May be absorbed.	Protective gloves. Protective Clothing	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
•EYES		Face shield, or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible, then take to a doctor.

Chemical danger: Upon heating, toxic fumes are formed. Reacts with hot concentrated nitric acid, boiling concentrated hydrochloric and sulfuric acids. Attacked by pure water and by weak organic acids in the presence of oxygen.

Physical danger: Dust explosion possible if in powder or granular form, mixed with air

PAH (Naphthalene)

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Flammable	NO open flames, NO sparks, and NO smoking	Water spray, dray chemical, carbon dioxide
EXPLOSION	Vapor/air mixture are moderately explosive	Closed system, ventilation, explosion-proof electrical equipment and lighting. Use nonsparking handtools. Prevent buildup of electrostatic charges (e.g., by grounding).	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		Avoid all Contact	
•INHALATION	Dizziness. Drowsiness. Headache. Nausea. Shortness of breath. Sweating, Confusion. Excitement. Convulsions. Unconsciousness.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Dry skin. Redness. Pain	Protective gloves. Protective clothing.	Remove contaminated clothes. Wash skin with soap and water or shower. Refer for medical attention.
•EYES	Redness. Pain	Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for 15 minutes (remove contact lenses if easily possible), seek medical attention
•INGESTION	Abdominal pain. Sore throat. Vomiting	Do not eat, drink, or smoke in work area	Rinse mouth; induce vomiting after two glasses of water. Refer for medical attention.

Chemical danger: Naphthalene reacts violently with oxidizing materials and chromium anhydride potentially causing moderate fire and explosion hazards.

Physical danger: Naphthalene evaporates easily, vapor/dust may travel along the surface; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated.

PAH (2-methylnapthalene)

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
FIRE	Moderately Combustible.	NO open flames, NO sparks, and NO smoking	Powder, AFFD, foam, carbon dioxide.
EXPLOSION	Limited Explosion hazard		In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		Avoid all Contact	
•INHALATION	Dizziness. Drowsiness. Coughing	Ventilation, local exhaust, or breathing protection.	Fresh air, rest.
•SKIN	Irritation. Dry skin. Redness. Pain	Protective gloves. Protective clothing.	Remove contaminated clothes. Wash skin with soap and water or shower.
•EYES	Redness. Pain	Face shield, or eye protection in combination with breathing protection.	Rinse with plenty of water for several minutes, remove contact lenses if easily possible, Seek medical attention
•INGESTION	Abdominal pain. Sore throat. Vomiting	Do not eat, drink, or smoke in work area	Rinse mouth. Do not induce vomiting. Give slurry of activated charcoal in water to drink. Seek medical attention.

Chemical danger: Decomposition of 2-methylnaphthalene produces acrid smoke and irritating fumes.

### **DIOXINS / FURANS**

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/ SYMPTOMS	PREVENTION	FIRST AID/ FIRE FIGHTING
•INHALATION	Harmful / respiratory tract / mucous membrane irritation / allergic respiratory reaction / delayed lung injury.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Refer for medical attention.
•SKIN	Irritation / sensitization / allergic reaction.	Protective gloves. Protective clothing.	Wash skin with soap and water or shower.
•EYES	Irritation		First rinse with plenty of water for 15 minutes (remove contact lenses if easily possible), seek medical attention
•INGESTION		Do not eat, drink, or smoke in work area	Medical attention immediately

#### 3.1.1 Air Monitoring

Air monitoring will include the following elements:

- 1. Ambient dust will be monitored using one aerosol / dust meter.
- 2. Volatile organics in the work area will be monitored by PID meter.
- 3. Combustible gases in the work area will be monitored by a four gas meter.

The HSO will have the responsibility to calibrate, set up, monitor, and maintain all safety meters and equipment utilized throughout the project.

#### 3.1.1.1 Ambient Dust

Dust monitoring will be performed using one (1) aerosol / dust meters (TSI 8520 DustTrak or equivalent) equipped with cyclone adapter, capable of detecting particulates less than 10 microns in diameter (PM10). The dust monitoring station shall be set up at the excavation work area. A second dust monitor may be used depending on location and size of work area.

Dust monitoring shall be performed when site activities have the potential to disturb soils or create dust which may contain COCs. Dust monitoring may be waived on days where precipitation prevents dust migration or when site activities are not likely to generate dust.

Actions level and protective responses are detailed on Section 3.1.2.

#### 3.1.1.2 Volatile Organics

Volatile organic compounds (VOCs) shall be monitored using a portable Photo Ionization Detectors (PIDs) (MiniRAE 2000-PGM 7600 or equivalent). HSO will evaluate the working conditions and determine when volatile organics will be monitored.

VOC monitoring, when performed, shall occur on a continual basis unless otherwise specified. Readings shall be recorded and documented in the daily progress reports.

Action levels and protective responses are detailed on Section 3.1.2.

#### 3.1.1.3 Combustible Gases

Combustible gases and available oxygen shall be monitored whenever intrusive activities are likely to encounter high concentrations of volatile organics. LEL/O<sub>2</sub> monitoring shall be performed using a portable four gas meter (LEL/O<sub>2</sub>/CO/H<sub>2</sub>S), operated in the active work zone. Readings from an upwind location shall be used to determine background concentrations. Action levels and protective responses are detailed on Section 3.1.2.

## 3.1.2 Action Levels & Protective Responses

The Site Health and Safety Officer will perform air sampling to determine airborne contaminant concentrations and document the concentration levels. Decisions to upgrade or downgrade PPE, or to modify engineering controls and work practices will be dependent upon the air monitoring data and the following table.

Project Task	Potential Hazards	Monitoring & Action Levels	Response & PPE Req'd.
Any task which can generate dust-	Excavation activities may cause a	Dust monitoring:	Modified Level D PPE to start.
containing contaminants of concern.	dust hazard in the work zone and site perimeter.	If $\leq 100 \text{ ug} / \text{m}^3$	Normal operations; continue hourly breathing-zone monitoring.
(Excavation, Soil/sediment stabilization, backfilling, etc.)	PCB impacted soil may be a health hazard in the work zone and site perimeter. PCBs: PEL: 0.5 mg/m <sup>3</sup> (8hr TWA)	If > 100 ug/m³ (30 min. TWA)	Implement dust suppression methods. Periodic personal air monitoring (PCB badges) and/or Dräger Tubes, determined by HSO.
	Lead impacted soils may be a health hazards in the work zone and site perimeter. Lead: PEL: 0.05 mg/m <sup>3</sup> (8hr TWA)	If > 150 ug / m³ (30 min. TWA)	Shut down or modify dust generating activity until dust levels are below 100 ug/m <sup>3</sup> .
Any task which is likely to	Excavating and stabilization of	VOC monitoring (by PID)	.Modified Level D PPE to start.
encounter VOCs, PAHs, or TPH  (Excavation activities waste handling, waste transporting and	sediment may create an exposure to VOCs, PAHs and TPH which is a respiratory hazard	lf ≤ 25 ppm	Normal Operations; Continue to hourly breathing zone monitoring
loading, etc.)	TPH creating a respiratory hazard PEL: 500ppm (8hr TWA)	If > 25 ppm (15 mm. TWA)	Stop work or implement vapor suppression methods Continue monitoring & upgrade to Level C PPE if necessary. Dräger Tubes, determined by HSO.
		If > 100 ppm (15 min. TWA)	Stop work. Evaluate alternate methods.
Any task which is likely to cause high levels of noise (Working with heavy equipment, chain saws, ect )	Working where high levels of noise can effect personnel's hearing	No specific noise instrumentation will be used.	Hearing protection shall be worn (ear plugs, ear muffs) for any work that may create a hearing protection hazard (as determined by the HSO).
Work in Confined Spac.	Explosive levels of volatile organics, oxygen deprivation	If O <sub>2</sub> ≤ 19 5%	Stop work, evacuate work area, mvestigate cause or reading, and ventilate area.
		If O <sub>2</sub> > 19.5% to < 23.5%	Normal Operations.
		If O <sub>2</sub> ≥ 23 5%	Stop work and ventilate until oxygen is 19.5 - 22.5%. Provide supplied air otherwise.
		If LEL ≤ 10%	Normal operations.
		If LEL > 10%	Stop work, ventilate area until LEL < 10%, and mitigate source of vapor.
		1(°CO ≤ 20 ppm	Normal operations
		If CO > 20 ppm	Stop work. Evacuate work area, ventilate area until CO < 20 ppm, and mitigate cause of reading.
		If H <sub>2</sub> S ≤ 5 ppm	Normal Operations.
		If H <sub>2</sub> S > 5 ppm	Stop work. Evacuate work area, ventilate area until H <sub>2</sub> S < 5 ppm, and mitigate cause of reading.

#### 3.1.3 Personal Exposure Monitoring

Personal exposure monitoring for high risk employees shall be performed by the HSO utilizing the portable air monitoring instruments and methods discussed in Section 3.1.1. Personal exposure monitoring shall be performed in the employee's work zone for a length of time sufficient to characterize the employee's time weighted exposure. Personal exposure evaluations shall be documented by the HSO in the daily records.

# 3.2 General Safety – Standard Operating Procedures

The activities to be performed at the site involve a variety of general construction tasks which present physical hazards that are not necessarily related to environmental contamination. The following general safety Standard Operating Procedures (SOPs) are incorporated into this HASP by reference. The project Superintendent and HSO should review these documents to ensure compliance with the programs, and maintain copies of all applicable SOPs at the work site.

All SOPs referenced below will be provided in a separate binder located in D.A. Collins field trailer.

- ACCIDENT INVESTIGATION REPORT
- ALCOHOL & DRUG POLICY
- ASPHALT EMERGENCY FIRST AID
- ASPHALT PAVING AROUND ELECTRICAL
- ASPHALT PAVING SAFETY
- CONFINED SPACE
- CRANES AND DERRICKS
- DISCIPLINE PROGRAM
- EMERGENCY ACTION PLAN
- EMERGENCY FIRST AID
- EMERGENCY NUMBERS
- EXCAVATION AND GRADING
- FIRE AND FIRE EXTINGUISHERS
- FIVE MINUTE HUDDLE FORMS
- GENERAL WORK RULE GUIDES
- HAZARD COMMUNICATION
- HAZARDOUS WASTE OPERATIONS
- LOCKOUT/TAGOUT
- MANAGEMENT COMMITMENT AND EMPLOYEE INVOLVEMENT
- MANAGEMENT RESPONSIBILITY
- MATERIAL HANDLING
- OVERHEAD WIRES/OVERHEAD UTILITY SAFETY
- PERSONAL PROTECTIVE EQUIPMENT
- POISONOUS PLANTS (Poison ivy, poison sumac, etc.)
- RABIES
- RESPIRATORY PROTECTION
- STATEMENT OF POLICY
- TICKS AND LYME DISEASE
- TRENCHING AND SHORING
- U.F.P.O.
- WORKING OVER WATER

# 4.0 Training

All personnel associated with remediation activities at the site must participate in a health and safety training program that complies with OSHA 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER), prior to mobilization at the site. This program instructs employees on the intent of the standard health and safety principles/procedures, proper operation of monitoring instruments, use of personal protective equipment, decontamination, and site specific emergency plans.

All personnel shall have an initial 40 hour-training course. This course is supplemented by an annual 8 hour refresher course. Any chemical specific training that may be required will be based upon compliance with 29 CFR 1910.1200, Hazard Communication.

Personnel responsible for supervision and on-site management relative to site operations receive an additional 8 hours of specialized training. Additional training is provided for those employees responsible for responding to site emergencies.

All employees who will enter confined spaces will be trained in Confined Space Entry in accordance with the applicable OSHA regulations. Personnel responsible for supervising, planning confine space entry and rescue will be adequately trained in their function duties prior to any confined space entry. Refresher training will be conducted as needed to maintain employees' competence in entry procedures and precautions.

# 5.0 Personal Protective Equipment

This section describes the general requirements of the Levels of Protection (A-D), and the specific levels of protection required for this project.

#### 5.1 Levels of Personal Protection

Personnel must wear protective equipment when activities involve potential contact with known or suspected contamination, when hazardous vapor, gases, or particulates may be generated by site activities, or when direct skin contact with hazardous substances may occur.

The specific levels of protection and necessary components for each have been divided into four categories according to the degrees of protection afforded:

#### Level A

Should be worn when the highest level of respiratory, skin, and eye protection is needed.

#### Level B

Should be worn when the highest level of respiratory protection is needed, but a lesser level of skin protection.

#### Level C

Should be worn when the criteria for using air purifying respirators are met, and a lesser level of skin protection is needed.

#### Level D

Should be worn only as a work uniform and not in any area with respiratory or skin hazards. It provides minimal protection against chemical hazards.

Modifications of these levels are permitted, and routinely employed during site work activities to maximize efficiency. For example, Level C respiratory protection and Level D skin protection may be required for a given task. Likewise the type of Chemical protective clothing will depend upon contaminants and degrees of contact.

The Level of Protection selected is based upon the following:

- Type and measured concentration of the chemical substance in the ambient atmosphere and its toxicity.
- Potential routes of exposure to substances by inhalation, dermal contact, ingestion, or other direct contact with material due to work being done.
- Knowledge of chemicals on-site along with properties such as toxicity, route of exposure, and contaminant concentration.

The required levels of personal protection area defined in Section 3.1 (Chemical Hazards). All on-site personnel will be required to comply with the personal protective levels of protection.

The various levels of protection for this project are defined as follows:

#### Level D

- Safety vests (optional)
- Sleeved shirt
- Full length pants
- Boots/shoes; chemical resistant, steel toe and shank
- Safety glasses or chemical splash goggles meeting ANSI Z.87.1 requirements
- Hardhat meeting ANZI Z.89.1 requirements
- Earplugs and/or earmuffs (optional as applicable)
- Face shield (where splash hazards exist)
- Rain gear (optional as applicable)
- Safety harnesses, lanyards and lifelines (optional as applicable)

# Level D (Modified)

This level of protection is used when concentrations(s) and types(s) of airborne substance(s) are known to be below the permissible exposure limits (PELs) or Threshold Limit Values (TLVs), and when

prevention of dermal contact is needed. Air purifying respirators should be readily available. Use of an air-purifying respirator with Modified Level D PPE will constitute Level C PPE.

The following constitute Modified Level D PPE, which may be used as appropriate:

- Safety vests (optional)
- Sleeved shirt
- Full length pants
- Boots/shoes; chemical resistant, steel toe and shank
  - o Disposable boot covers (where appropriate)
- Safety glasses or chemical splash goggles meeting ANSI Z87.1 requirements
- Hardhat meeting ANSI Z89.1 requirements
- Chemical protective suits
  - White Tyvek (dry work)
  - o Polyethylene coated Tyvek (wet work)
- Gloves
  - o Nitrile gloves
- Safety harnesses, lifelines and lanyards (optional as applicable)
- Earplugs and / or earmuffs (optional as applicable)
- Face shield (decontamination pad employees)

#### Level C

This level of protection applies when the concentration (s) and types(s) of airborne substance(s) are known and the criteria for using air purifying respirators are met. The following constitute Level C PPE, which may be used as appropriate.

- Air purifying respirator (NIOSH approved) with appropriate cartridges as listed below:
  - Half face for full face respirator with OV/HEPA cartridges for all work where action levels dictate respiratory protection.
  - o The HSO shall evaluate the protection factors of both full face and half face respirators with respect to the anticipated concentration of COCs and shall direct the employee as to which style shall be utilized.
- Sleeved shirt
- Full length pants
- Boots/shoes; chemical resistant, steel toe and shank
  - o Disposable boot covers (where appropriate)
- Safety glasses or chemical splash goggles meeting ANSI Z 87.1 requirements
- Hardhat meeting ANSI Z89.1 requirements
- Chemical protective suits
  - o White Tyvek (dry work)
  - o Polyethylene coated Tyvek (wet work)
- Gloves
  - o Nitrile gloves
- Safety harnesses, lifelines and lanyards (optional as applicable)
- Earplugs and / or earmuffs (optional as applicable)
- Face shield (decontamination pad employees)

#### Level B

This level of protection applies when the concentration(s) and types(s) of airborne substance(s) are known and the criteria for using supplied-air respirators are met. The following constitute Level B PPE, which may be used as appropriate.

- Supplied air respirator (NIOSH approved):
- Sleeved shirt
- Full length pants
- Boots/shoes; chemical resistant, steel toe and shank
  - o Disposable boot covers (where appropriate)
- Safety glasses or chemical splash goggles meeting ANSI Z 87.1 requirements
- Hardhat meeting ANSI Z89.1 requirements
- Chemical protective suits
  - o White Tyvek (dry work)
  - o Polyethylene coated Tyvek (wet work)
- Gloves
  - o Nitrile gloves
- Safety harnesses, lifelines and lanyards (optional as applicable)
- Earplugs and / or earmuffs (optional as applicable)
- Face shield (decontamination pad employees)

#### Level A

Level A PPE is not anticipated for this project. If site hazards require Level A PPE, the Director of Safety and / or the Project Manager will determine the safety protocol and provide a formal amendment to this HASP.

# 5.2 PPE Storage and Maintenance

Clothing and respirators will be stored properly to prevent damage or malfunction due to exposure to dust, moisture, sunlight, damaging chemicals, extreme temperatures and impact. Many equipment failures can be directly attributed to improper storage.

Different types and materials of clothing and gloves will be stored separately to prevent issuing the wrong material by mistake. Protective clothing will be folded or hung in accordance with the manufacturers' recommendations. Contaminated clothing for re-use will remain in the contaminant reduction zone.

Air-purifying respirators will be stored in a clean re-sealable plastic bag. Cartridges will be removed from the respirators prior to storage.

SCBAs, supplied air respirators and air purifying respirators, if required, will be regularly dismantled, washed and disinfected. SCBAs will be stored in storage chests supplied by the manufacturer. Air purifying respirators should be stored individually in their original cartons or carrying cases, or in heat sealed or re-sealable plastic bags.

The technical aspects of PPE maintenance procedures vary by manufacturer and type of equipment. It is the responsibility of each employee to review, understand, and comply with the recommended maintenance procedures for any PPE assigned to him.

# 5.3 Training and Proper Fitting

Training: Employees have been trained in the proper use of protective equipment prior to using any equipment on-site. The purpose of the training has been to: (1) become familiar with the equipment in a non-hazardous situation; (2) instill confidence and awareness in the user of the limitations and capabilities of the equipment; (3) increase the operating and protective efficiency of PPE use; and (4) reduce maintenance expenses.

Respirator Fit Testing: The "fit" of the facepiece to face seal of a respirator will be tested on each potential wearer to ensure a tight seal; every face piece does not fit every wearer. Certain features, such as scars, very prominent cheekbones, deep skin creases, dentures or missing teeth and the chewing of gum and tobacco may interfere with the respirator to face seal. Under conditions where these features may impede a good seal, a respirator must not be worn. All personnel who may wear a respirator will be qualitatively fit tested with irritant smoke, isoamyl acetate, or equivalent methods according to 29 CFR 1926.103 at least semiannually. Where a qualitative fit test is used in lieu of a quantitative fit test, the HSO shall reduce the safety factor by 50% when evaluating respiratory protection requirements.

# 6.0 Medical Surveillance Program

This medical surveillance program is designed to survey pre-employment or baseline conditions prior to potential exposures and monitor physical conditions on a regular basis. All HAZMAT workers on this project are required to comply with the medical monitoring program.

# 6.1 Baseline Medical Monitoring

Prior to employment, each employee must receive a baseline medical examination as outlined in the D.A. Collins corporate safety program.

The content of the baseline medical examinations will be determined by the employer's medical consultant based upon the potential exposures of the worker and the nature of the duties to be performed. The medical monitoring examinations must certify employees as fit for duty and able to wear respiratory protection and insure that no chemical exposure has occurred during the course of normal operations.

# 6.2 Periodic Medical Monitoring

In addition to a baseline examination for all employees, regular annual examinations shall be performed unless the advising physician believes a shorter interval is appropriate. Annual exams must fulfill OSHA 29 CFR 1910 and 1926 requirements.

The Project Manager or Site HSO will verify all personnel working in potentially contaminated areas at the site are currently (within 12 months) participating in a medical surveillance program. This is done by obtaining a copy of the physicians written opinion form for the medical surveillance at the job site.

# 6.3 Exposure or Injury Medical Support

As a follow up to an injury or possible exposure above established exposure limits, all employees are entitled to and encouraged to seek medical attention and medical testing. Depending upon the type of exposure, it is critical to perform follow up testing within 24-48 hours. The medical consultant will advise as to the type of test required to accurately monitor for exposure effects.

# 6.4 Exit Medical Monitoring

At termination of employment, reassignment, or at the physician's discretion each employee shall complete an exit medical surveillance examination. The content of the examination is to be determined by the employer's medical consultant.

#### 7.0 Site Control Measures

This section defines measures and procedures for maintaining site control. Site control is an essential component in the implementation of the site health and safety plan.

# 7.1 Site Maps and Work Zones

The Project Superintendent will maintain a copy of all site maps and drawings at the D.A. Collins office trailer. Site maps and work zones shall be fully available to all workers and provided to any employee or site visitor upon request.

# 7.2 Site Security

Entry and exit to and from the site will be limited to authorized personnel only. All personnel must sign in at the Project Office and complete and entry into the Daily Visitor Log (see Exhibit 5).

Entry and exit to and from the site will be permitted only through designated access points, except during an emergency or as authorized by the Superintendent or HSO.

All visitors and subcontractors entering the site must be approved with the owner prior to arrival on-site. Anyone entering the active remediation areas will be required to read and verify compliance with the provisions of this HASP. Visitors will be expected to comply with relevant OSHA regulations and expected to provide their own protective equipment.

In the event that a visitor does not adhere to the provisions of the HASP, he/she will be requested to leave the work area. All nonconformance incidents will be recorded in the site log.

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#### 7.3 Work Zone Definitions

Work zones shall be delineated as described below. Variations to the designation, layout, or configuration of the work zones must be authorized by the HSO, Project Manager, or Director of Safety. Construction fence, tape, cones, or other warning barriers will be placed to identify the various work zones.

#### 7.3.1 Exclusion Zone

Exclusion Zones are restricted areas where work activities create a high potential for exposure. Entry into the exclusion zone is limited to authorized personnel only, equipped with the proper PPE as described in Sections 3.1 and 5.0.

Exclusion Zones for this project shall include, but are not limited to, the following areas:

- Active removal areas where project tasks are intrusive and likely to encounter contaminated materials.
- The exclusion zone at Newell Street Area II includes the entire excavation, handling and stockpiling area (s).

#### 7.3.2 Contamination Reduction Zone

Contaminant Reduction Zones are designated as transition areas between the Exclusion Zone and the Support Zone. Activities in the CRZ may involve decontamination of personnel or equipment, waste containment, or other activities where the possibility of direct exposure to contaminants is reduced. Authorized personnel entering a CRZ may be required to use PPE as designated in Sections 3.1 and 5.0. The need for PPE shall be determined by the HSO based upon the anticipated tasks to be completed.

Contaminant Reduction Zones for this project shall include the following areas:

- Entrance areas adjacent to active removal areas (Newell Street entrance, temporary roads through the site).
- The equipment and truck decontamination pad.
- All other areas within the limits of work, but outside of EZs, shall be considered CRZs with respect to authority, training, and PPE requirements.

#### 7.3.3 Support Zone

Support zones are all other areas of the project which are active as part of the operation. Support zones do not require special access authority, training or PPE. All areas of the site not designated as EZs or CRZs shall be considered Support Zones.

#### 7.4 Site Communications

Successful communications between personnel in the various zones is essential. Contact with outside services and agencies are also essential to summon emergency services. The following communications system will be available during activities at the site.

Hand Signal	Definition
Hands clutching throat	Out of air, Can't breathe
Hands on top of head	Need assistance
Thumbs up	OK / I understand
Thumbs down	No / negative
Arms waving upright	Send backup support
Grip partners wrist	Exit area immediately

Communications equipment for this project shall include the following:

- Two Way Radios
- Portable Cellular Telephones
- Telephones in Project Office

#### 8.0 Personal Decontamination Procedures

# 8.1 Personal Hygiene

- Site personnel must thoroughly wash their hands and faces before eating.
- Facial hair will not be allowed where the respirator seal contacts the face.
- Personnel will not eat, smoke, or chew tobacco in the exclusion zone.

#### 8.2 Personal Decontamination

Personnel and equipment decontamination varies depending on the level of PPE required at the site. Personnel and equipment decontamination is necessary when personnel or equipment enter and exit an Exclusion Zone or Contaminant Reduction Zone.

The following procedures have been established to provide site personnel with minimum guidelines for proper decontamination. These minimum procedures must be followed by all personnel donning PPE in accordance with this HASP. The decontamination process shall take place at a reasonable distance from any area of potential contamination.

Designated stations will be established within the Contaminantion Reduction Zone (CRZ) and include, at a minimum, wash tubs, scrub brushes, detergent/water and rinse water when appropriate for non-disposable equipment. Non-disposable equipment will be cleaned and staged for the next use. Wash stations shall consist of a potable water supply, hand soap and clean towels. In most instances, employees will perform self decontamination. In cases where further assistance is necessary, such as Level C operations, employees will be designated to work within the CRZ to assist employees with decontamination. Modifications of the decontamination procedures may be necessary as determined by the HSO. Decontamination solutions will be contained in 55 gallon drums, sampled and disposed of consistent with regulatory guidance and applicable regulations.

#### 8.3 Decontamination Procedures

The following decontamination procedures shall be implemented during site activities for the appropriate level of protection. Decontamination procedures for Level B or Level A PPE are not anticipated for this project, and will be determined by the HSO or Project Manager in a formal amendment to this HASP if necessary.

#### 8.3.1 Level D Decontamination Procedure

- 1. Segregated Equipment Drop: Deposit contaminated equipment (tools, sampling devices, monitoring instruments, etc.) onto plastic drop cloths or other designated containers.
- 2. Boot, Outer Glove and Coverall Wash: Brush overboots (if used), outer gloves (if used) and coveralls (if used) free of residual materials. If necessary, wash with detergent/water solution and rinse with water.
- 3. Boot, Outer Glove and Coverall Removal: Remove overboots (if used), outer gloves (if used), and coveralls (if used) in that order. Place disposable overboots, outer gloves, and coveralls into a waste container. Stage non-disposable equipment for decontamination and future use.
- 4. Inner Glove Wash and Removal: Wash and remove inner gloves (if used) and place in lined container.
- 5. Field Wash: Wash hands and face thoroughly.

#### 8.3.2 Level C Decontamination Procedure

- 1. Segregated Equipment Drop: Previously described.
- 2. Overboot, Outer Glove and Coverall Wash: Overboots, outer gloves and coveralls shall be brushed free of bulk residual materials and scrubbed with a detergent/water solution if necessary.
- 3. Tape R emoval R emove tape from a round boots and gloves and place into container with a plastic liner.
- 4. Removal of overboots and Outer Gloves: Remove overboots and outer gloves in that order. Non disposable overboots and gloves will be staged for future use and disposable overboots and gloves will be placed into a waste container.
- 5. Cartridge Change: This is the last step in the decontamination procedures for those workers wishing to change respirator cartridges and return to the exclusion zone. The workers cartridges are exchanged, new outer gloves and overboots are donned, and joints are taped. For workers moving to a Support Zone, spent cartridges will be removed as part of step 7.
- 6. Removal of Chemical Resistant Clothing: With care, remove chemical resistant suit. The exterior of the suit shall not come into contact with any inner layers of clothing. Place disposable clothing in a waste container.
- 7. Remove Respirator: Remove respirator and place on plastic. Keep face/glove contact to a minimum.
- 8. Inner Glove Removal: Remove inner gloves and deposit in a waste container.
- 9. Field Wash: Wash hands and face thoroughly.

# 8.4 Emergency Decontamination Procedures

Should an injured person have an excessive exposure to contaminated soil, groundwater, or other materials, they will be decontaminated, if appropriate, and brought immediately to the hospital. The HSO will decide whether or not to decontaminate an affected employee, and the decision will be based upon the type and severity of the illness or injury and the nature of the contaminant.

For some emergency victims, immediate decontamination may be an essential part of life saving first aid. For others, decontamination may aggravate the injury or delay life saving treatment. If decontamination does not interfere with essential treatment, it may be performed by any employee trained in the appropriate decontamination procedures, including respiratory protection and personal protective clothing.

While performing the decontamination procedures, the protective clothing of the affected employee will be washed, rinsed and/or cut off. If decontamination cannot be performed, then the victim will be wrapped in blankets, plastic or rubber to reduce contamination of other personnel. Emergency and offsite personnel will be alerted to potential contamination, and they will be instructed in specific decontamination procedures if necessary. At least one person familiar with the incident will be sent along with the victim during emergency treatment.

# 9.0 Equipment Decontamination Procedures

# 9.1 Equipment Decontamination

Decontamination of equipment will be performed to prevent the migration of contaminants off-site and between work areas on the site. All equipment and other tools will be cleaned prior to site entry to remove grease, oil, encrusted dirt, or other materials. An inspection of the equipment will be made by the Project Superintendent prior to approving equipment for use on-site.

Decontamination of small reusable equipment will be performed at a designated location within the contamination reduction zone. Decontamination of equipment will consist of soap and water washing and water rinse.

Following decontamination, clean equipment will be securely stored away from potential contaminants if not immediately used. The Project Superintendent will be responsible for inspecting all equipment leaving the site for adequacy of decontamination.

#### 9.2 Decontamination Methods

Equipment decontamination will include gross removal of bulk debris at the TDP by brushing or scraping followed by thorough decontamination with a steam cleaner (hot pressure washer) with a

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minimum 3,000 psi pressure rating and industrial grade degreaser performed at the Equipment Decontamination Area (EDA).

Small tools and equipment which can not be safety pressure washed will be hand washed with a warm detergent solution within the EDA.

All portions of transport vehicles that have contacted materials subjected to removal (e.g., wheels, dump body exterior, etc.) will be decontaminated within the on-site Truck Decontamination Pad (TDP) prior to leaving the site. Refer to the Operation Plan for further information.

Non-disposable equipment cleaning shall be deemed complete based on a review by GE and the analytical results of the wipe samples. GE may require additional cleaning efforts based on the analytical wipe samples.

# 9.3 Disposal of Decontamination Wastes

Personal protective equipment will be co-disposed with bulk solid waste and disposed of at the Building 71 OPCA.

Decontamination water will be collected, and stored in frac-tanks and transported to GE's treatment facility.

Solid material generated from the decontamination of the equipment shall be co-disposed with bulk-solid waste and disposed of at the Building 71 OPCA.

# 10.0 Emergency Response Plan (ERP)

# 10.1 Emergency Planning

During the site briefings held periodically, all employees will be trained in and reminded of provisions of the emergency response plan, communication systems, and evacuation routes. The plan will be reviewed and revised if necessary, on a regular basis by the Project Manager and Site HSO. This will verify that the plan is adequate and consistent with prevailing site conditions.

The HSO shall attend and participate in any planning meetings required by local emergency management departments (hospital, fire, police, hazardous materials, etc.) for the purpose of coordinating emergency response to the project site and communicating and procedural requirements or information needs.

The HSO has primary responsibility for responding to and correcting emergency situations. This includes taking appropriate measure to ensure the safety of site personnel and the public. Possible

actions may involve evacuation of personnel from the site area. He is additionally responsible for verifying corrective measures have been implemented, appropriate authorities notified, and follow up reports completed. The HSO will direct responses to any medical emergency.

All employees are responsible for assisting the HSO within the parameters of their scope of work.

In the event of an emergency, the site HSO shall be responsible for notifying the proper authorities and implementing any appropriate measures. A local map and directions to the nearest hospital are attached in Exhibit 4. Emergency access / egress routes are visible on the map.

# 10.2 Emergency Meeting Place and Signals

A clear, safe exit route and meeting place will be setup for personnel to meet should a release occur (fire, explosion, ect.). All personnel will be informed about the routes from the Work Area to the Meeting area. Air horns will be placed at each Work Zone and will indicate a release has occurred.

#### 10.3 Spill Prevention and Countermeasures

Spill prevention has been developed as an integral part of the operations plan developed for this project. The key elements of the spill prevention program include:

- Leak proof containment liners on equipment decontamination pads.
- Spill proof fuel storage areas.
- On-site inventory of spill response materials including sorbent pads and boom.
- Storm water management systems have been established to prevent washout and migration of active sediment removal areas.

Where hazardous substances may be released by spilling sediments or other hazardous substances, such that employees may be exposed to these hazards, HAZMAT trained employees must perform the appropriate spill containment procedures. The spill containment procedures for this project include the following:

- Solid Spills The Contractor shall immediately remove and place impacted materials into staging piles and cover; identify the piles as impacted; test the material for disposal requirements, if appropriate, dispose of at an approved offsite treatment, storage and disposal facility as specification Section 01640, "Offsite transportation and Disposal".
- Liquid and/or Sludge Spills The Contractor shall absorb with sand, clean fill, or other absorbent
  material and dispose of the absorbent/spill mixture in the manner specified in the paragraph
  above.
- Application of absorbents, e.g. sorbent pads, lime kiln dust
- Fuel spills on water will be managed with floating oil booms, sorbent pads and other typical water based spill management practices.

Employees performing these procedures are required to wear the proper protective clothing and equipment for the materials present, and to follow established standard operating procedures for spill

control. The HSO shall evaluate the conditions of the spill and determine the appropriate level of PPE. In many cases, the chart in Section 3.1 may provide quick guidance.

Once contained, the spill shall be cleaned up in accordance with routine remediation methods. Upon completion of a satisfactory cleanup, the spill incident shall be reviewed by all management personnel in order to determine the conditions leading to the spill, additional prevention methods, and corrective actions to be immediately implemented.

# 11.0 Recordkeeping

Implementation of the provisions of this HASP must be completely documented. The Project Manager must set up a separate file to receive health and safety related records and activity reports. This file should contain the following records:

- One copy of the site specific HASP.
- Material Safety Data Sheets (MSDS).
- Daily Safety Logs.
- A list of personnel engaged in site activities and verification of the required training and medical monitoring.
- Employee injury/exposure incident reports.
- Safety violation records and remedial actions taken.
- Other pertinent health and safety related observations.
- Air sampling instrumentation records, sampling data sheets, and chain of-custody forms.
- Accident/Incident Reports.

All field personnel must sign the Compliance Agreement, indicating that they have attended a briefing by the Project Manager or HSO, understand, and agree to abide by the provisions of this HASP prior to working at the site. Personnel will be trained by the Project Manager or Site Health and Safety Officer before entering the site.

Health and safety documents shall be submitted to the Project Manager for inclusion in the weekly progress reports.

# 12.0 Material Safety Data Sheets

MSDS will be submitted for all hazardous chemicals onsite. M SDS will be made readily available, upon request, and will be located in the Contractor's field office.

# 13.0 Sanitation

Wash stations and sanitary facilities will be available onsite. The sanitary facilities will be maintained and cleaned on a weekly basis.

# 14.0 Approvals

This HASP has been reviewed by the undersigned parties. Each party understands his / her responsibilities and duties and will comply with requirements herein and enforce compliance throughout the duration of the project.

Project Manager	Date
Project Superintendent	Date
Director of Health and Safety	Date
Health and Safety Officer	Date

## Health and Safety Plan Review Acknowledgement and Compliance Agreement

I,	have read this Health, Safety, and	d Contingency Plan and
	ions and to aid the Project Manager in it	-
	erest to see that site operations are condu to site health and safety conditions at al	
Signature		Date

## Contractor/Subcontractor OSHA Certification

Company Name:						
Company Address:						
Company Address:						
Company Official:						
Phone:						
As an official of the listed Contractor or Subcontractor, I under the (the site) need and respirator certified in accordance with 29 CFR 1910 and 1926 (	derstand that all company personne ed to be trained, medically monitored (the regulations).					
I certify that company personnel employed at the site will have current training, medical monitorin testing and respirator clearance in accordance with the regulations and that all records documentation are available for review.						
I understand that this certification is not a substitution for the submrecords and documentation; and that actual documentation may r D.A. Collins Environmental Services.						
I will instruct all employees intended to work at the site to review and Contingency Plan as required.	and acknowledge the Health, Safety					
I certify that I am authorized to act on behalf of the company and employees and all workmanship are in compliance with this certific						
Signature	Date					
Printed Name	Title					

## Medical Data Sheet

Printed Name	Title						
Signature	Date						
Drugs:							
Health, Safety and Contingency P							
	hich may affect my ability to work safely and in accordance wit	h the					
	or otherwise) that will impact my ability to work safely and in y and Contingency Plan as required.						
Condition:							
	on which may affect my ability to work safely and in accordance by Plan as required. (Explain Below)	e with					
I have no medical conditions Health, Safety and Contingency P	s that will impact my ability to work safely and in accordance wlan as required.	ith the					
Check the appropriate boxes							
Charle the engraphists haves							
Company Official:							
Company Address:							
Company Name:							
Employee Name:							

## Route to Hospital

From: Newell Street, Pittsfield, NY 01201

To: Berkshire Medical Center: 413-447-2000

725 North St, Pittsfield, MA 01201

**Driving Directions:** 

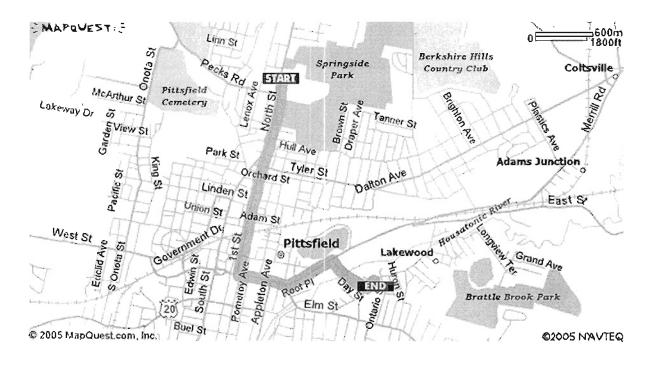
Start out going SOUTHWEST on NEWELL ST toward SACKETT ST.

Turn RIGHT onto LYMAN ST. Turn LEFT onto EAST ST.

Turn RIGHT onto 1<sup>ST</sup>/US-7. Continue to follow US-7.

End at Berkshire Medical Center, 725 North St, Pittsfield, MA 01201

Total Estimated Time: 6 min Total Distance: 2.37 miles



Daily Visitor Log

## **DAILY VISITOR LOG**

Name	Company	Arrival Time	Departure Time	Purpose of Visit
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	-			•
		- Management was		
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## Attachment B

# D.A. Collins Environmental Services – Operations Plan



#### SUBMITTAL FOR:

# GENERAL ELECTRIC COMPANY NEWELL STREET AREA II

PITTSFIELD, MA

# **OPERATIONS PLAN**

#### SUBMITTED TO:

GENERAL ELECTRIC COMPANY

Mr. Richard W. Gates 159 Plastics Avenue Pittsfield, Massachusetts 01201 BLASLAND, BOUCK & LEE, INC.

Mr. Andrew C. Corbin 6723 Towpath Road Syracuse, New York 13214

#### SUBMITTED BY:

D.A. COLLINS ENVIRONMENTAL SERVICES

101 Route 67, PO Box 191 Mechanicville, New York 12118-0190 Ph. 518-664-9855 / Fax 518-664-9609



A Proud Member of the D.A. Collins Companies

**JUNE 22, 2005** 

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#### 1.0 Overview

This Operations Plan is submitted to provide general information on the means, methods, and sequence of operations to be completed in performance of the GE – Pittsfield Massachusetts, Newell Street Area II Project.

The Operations Plan is intended to supplement the other plans governing various aspects of the project (see Section 1.1 below). A copy of this Operations Plan shall be maintained on-site at all times and updated as necessary.

This Operation Plan provides information on material and equipment staging and general methods of operation for the following major phases of the project:

- Site Setup
- Clearing & Grubbing
- Erosion Control
- Utility Identification and Protection
- Survey
- Removal, Relocation and Reassembly of NAPL Collection System
- Concrete Pad Construction
- Soil Removal, Staging and Transportation Activities
- · Backfilling, Grading and Shaping
- Construction of Engineer Barriers
- Surface Restoration
- General Restoration
- Natural Resource Restoration
- Demobilization

#### 1.1 Related Documents

The following documents are incorporated by reference and should be reviewed and utilized as part of this Operations Plan.

- Health, Safety & Contingency Plan (HASP)
- Project Schedules (Preliminary and Updates)

## 1.2 Project Schedule & Major Phases

A Preliminary Project Schedule to be (submitted under separate cover) will set forth the general sequence and duration of the various activities. The Project Schedule shall be considered a supporting document to the Operation Plan and will be updated on a monthly basis or as necessary where a change in the sequence or scope is required.

## 2.0 Site Setup

D.A. Collins will mobilize the labor, materials and equipment necessary to complete the work and maintain temporary site facilities. D.A. Collins will have one or more crews made up of D.A. Collins employees, subcontractors, and local union operators and laborers. The crews, equipment, and materials will be mobilized at the appropriate times to complete each specified tasks.

## 2.1 Equipment

At a minimum, D.A. Collins intends to mobilize the following equipment during the course of the project:

- JD-550 Dozer
- IT28 Loader
- CAT-325 Backhoe
- Duel Drum Roller
- Paver
- Water Truck
- Pickup Trucks
- Backup Generators (as needed)
- Light Plants (as needed)
- Frac Tank (s)

#### 2.2 Field Office and Decon Trailer

The Field Office Trailer will be a separate trailer located at the GE facility in Pittsfield (which is within approximately on mile of the work site) unless otherwise authorized by GE. The specific location to be utilized for the field trailer will be determined by GE. D.A. Collins (DAC) will coordinate with the appropriate utility company(s) for installation of electric and telephone services for the office trailer.

The Decontamination Trailer will be located at the Newell Street Area II Site. The specific location will be determined by the Site Superintendent and approved by the GE. The Decontamination Trailer is described in the HASP.

#### 2.3 Sanitation

Wash stations and sanitary facilities will be available onsite. The sanitary facilities will be maintained and cleaned on a weekly basis.

## 2.4 Equipment Storage

Equipment and material storage will be in areas that are not subjected to remedial activities. When not being utilized, excavation and other material-handling equipment will be stored within areas subject to excavation. Areas that have been excavated and backfilled may also be utilized for storage of equipment and/or material provided those items have not contacted impacted material or have been fully decontaminated. D.A. Collins will notify GE if additional storage areas are required.

### 2.5 Temporary Access Roads

Primary access to the work site will be through the driveway located off Newell Street, although D.A. Collins may construct additional roads as necessary to provide access for equipment and vehicle required for soil removal, loading, and transportation, with approval from GE.

## 2.6 Equipment Decontamination Pad

Trucks hauling excavated materials to the OPCAs will be decontaminated (as necessary) on-site using a high-pressure wash station located at the Truck Decontamination Pad (TDP). Wash water will be stored in frac tanks and transported via tanker truck to GE for treatment. The TDP will be installed at a mutually agreed location onsite. Construction of the TDP will include the following:

- Rough grading of the TDP area, with sloping to a corner sump for water collection and removal. Grading should establish a base elevation approximately 1' lower than the surrounding surface.
- Installation of 6" (minimum) of cushion sand across the entire surface with 6"-12" berms on all sides.
- Installation of geotextile fabric over the sand base and berms.
- Installation of 40 mil polypropylene liner over the fabric.
- Tie-down of the liner perimeter with sandbags.

D.A. Collins intends to utilize the Equipment Decontamination Area (EDA) for final equipment decontamination. Equipment will be cleaned of loose soil and debris at the TDP prior to transport to the EDA.

Equipment decontamination shall be deemed complete upon review by GE's Representative of the analytical results of the wipe samples obtained per Section SP-3.34.

#### 2.7 Chain Link Fence and Guide Rail Removal

The existing chain link fence around the work area will be removed for disposal or stored onsite for reinstallation (where authorized by the GE). New fence shall be installed as specified on the drawings and Technical Specifications Section 02207.

The guide rail will be removed and sent to Building 71 OPCA in accordance with the Technical Specifications.

## 2.8 Temporary Fencing

D.A. Collins will install and maintain temporary fencing (4-foot high orange construction fence) or other temporary barriers to minimize unauthorized or unknowing access to the work site. At a minimum, the following areas will be subjected:

- Areas where soil removal or loading activities occur;
- Areas designated as health and safety zones (e.g., Exclusion, Support, and Decontamination Zones);
- Areas where the activities may cause a disruption to the normal vehicular or pedestrian traffic at the work site; and
- Existing fence line areas that are temporarily removed to facilitate remedial activities.

## 2.9 Initial Site Survey

Hill Engineering will perform the initial survey, periodic and final as-builts including volumetric calculations. All survey will be performed in accordance of Section SP-3.33. Additionally, D.A. Collins' in-house surveyor will be utilized for grade checks, layouts, and other QC efforts. Grade stakes and flagging will be used to designate the various work areas.

## 2.10 Removal and Relocation of NAPL Collection System

D.A. Collins will coordinate with GE for the deactivation and relocation of various components for the NAPL collection system including: removal of the NAPL collection system (NAPL collection system temporary shutdown and component disassembly to be performed by GE); construction of a new concrete pad; relocation of the NAPL components onto the newly installed concrete pads. The NAPL collection system component reassembly and system start-up will be performed by GE. A detailed Operations Plan Addendum (OPA) will be prepared in conjunction with GE in order to address specific environmental and safety hazards associated with this task.

## 2.11 Protection of Existing Structures and Utilities

D.A. Collins will contact Massachusetts Digsafely at least five days prior to any ground intrusive activities. The Digsafely file number will be provided to the GE for record purposes. Utility locations within the property limits will be surveyed and marked to indicate the presence of underground utilities.

Existing structures such as utility poles, high tension towers, and monitoring wells or utilities that are located within the work limits will be clearly marked and protected where possible.

## 2.12 Monitoring Well Decommissioning

Forty groundwater monitoring wells and six dense non-aqueous phase liquid recovery wells are located within the Newell Street Area II. GE will perform the well decommissioning activities at the site prior to D.A. Collins initiating response actions. D.A. Collins will protect and perform above-ground well extensions as necessary on the remaining wells.

D.A. Collins will consult GE during or prior to mobilization for the locations of the remaining wells requiring protection and casing extensions.

#### 2.13 Traffic Control Plan

DAC's Superintendent will be responsible for daily inspection and adjustment of all traffic controls. The basic components of the Traffic Control Plan include the following:

- Signage will be posted restricting unauthorized vehicular traffic from entering the Newell Street Area II site.
- A flagman will be utilized at the Newell Street entrance when necessary to support excavation or backfill truck traffic.
- Pedestrian traffic will be controlled with temporary fencing as detailed in Section 2.8 of this Operations Plan.

## 3.0 Clearing & Grubbing

## 3.1 Clearing

Clearing will be performed using traditional methods for cutting and stockpiling trees and brush.

D.A. Collins will chip small trees and brush (18" minus) prior to transportation to Building 71 OPCA. Larger trees and logs will be cut into 4-foot sections (maximum) and shipped to the OPCA for disposal per Section SP-3.19.

## 3.2 Grubbing

Grubbing will begin after the entire site has been cleared. Stump grubbing will generally be performed with an excavator during soil removal operations. Grubbed stumps will be split and sized for disposal at the OPCA per Section SP-3.19.

#### 3.3 Erosion & Sediment Control

Erosion and sediment controls will be installed concurrently during site preparation and clearing activities. The erosion control measures for this project include but are not limited to the use of hay bales, erosion control blankets and silt fencing as specified in the contract documents. Erosion and sediment controls will be installed per Technical Drawing 2 and related details. D.A. Collins will maintain all erosion and sediment controls throughout the duration of the project.

Erosion and sediment control measures shall be regularly inspected to ensure that they are operating correctly. Inspections shall occur at a minimum on a weekly basis, and immediately following periods of rainfalls greater than 0.5 inch. The inspections must verify that all practices are adequately operational, maintained properly, and that any accumulating sediment is removed from all control structures. The inspection must also look for evidence of soil erosion on the site, potential of pollutants entering drainage systems, problems at discharge points (such as turbidity in receiving water), and signs of soil and mud transport from the site to the public road at the entrance.

## 4.0 Soil Removal

#### 4.1 Soil Excavation

Soil excavations within the limits of the Newell Street Area II will be performed using traditional excavation methods. Where practical, contaminated soil will be directly loaded into waste transport vehicles for off-site disposal at the Building 71 OPCA.

In general, soil removal will proceed from the northwest position of the site and proceed toward the Newell Street entrance. Excavation will be made to the horizontal and vertical limits specified on the Technical Drawings or as modified by GE. D.A. Collins on-site survey will provide the appropriate field measurements to confirm that excavation has progressed to the specified limits. In order to maintain production, D.A. Collins will notify the GE's site representative of the excavation plan for each day's work. Additional soil removal, if required by GE, must be clearly marked out and communicated to D.A. Collins so that those areas can be incorporated into the daily excavation plan without delay.

Excavated areas will not be backfilled until authorized by GE.

## 4.2 Excavation Slope Stabilization

Based on the target areas and excavation depths, it is assumed that the majority of the excavation will not require stabilization or support. Where excavation depths are greater than 4 feet or where sidewall stability is insufficient to support the excavation, D.A. Collins will employ standard OSHA sloping and benching methods. Additional excavation volumes generated by sloping or benching have been anticipated within the proposed Operation Plan and Project Schedule.

If excavation conditions prohibit benching and sloping methods and alternative engineered support system will be designed and implemented as necessary. Any proposed engineered support will be signed by a Massachusetts registered P.E. and subject to approval by GE.

## 4.3 Material Handling and Staging

When excavated material cannot be directly loaded into vehicles/containers to be used for transportation to the Building 71 OPCA, temporary lined stockpiles will be utilized within areas subjected to soil removal actions. Temporary stockpiles will be subjected to the requirements listed in Section SP-3.29 and will be preferentially loaded out to the Building 71 OPCA prior to further excavation efforts.

D.A. Collins may also temporarily stage clean fill soils to be used for backfill within completed and accepted excavated areas. Temporary staging of these materials will also be subjected to Section SP-3.29 requirements.

#### 4.4 Easement Areas

To minimize the potential impacts of the utility lines and transmission towers, excavation in these easement areas will be performed in accordance with the requirements of Sections SP-3.15 and SP-3.25 and Section 2.9 of this Operations Plan. Prior to the placement and compaction of backfill within easement areas, D.A. Collins will place a layer of geotextile material, to delineate original soils from backfill material.

Due to the unknown condition and construction of the transmission towers and their foundations, D.A. Collins will excavate adjacent to these structures using a sequential removal strategy in order to minimize the amount of foundation exposure in any one area. Sheeting, shoring or any other form of support / reinforcement as deemed necessary will be determined in the field at the time of excavation.

## 4.5 Coordination of Off-site Transportation of Excavated Material

D.A. Collins will provide three days notice to GE prior to shipping any materials to the OPCA so that GE may coordinate with the OPCA Contractor. Whenever possible D.A. Collins will directly load trucks during excavation for direct transport to the OPCA. At a minimum D.A. Collins will transport 320 cubic yards of excavated material per day for processing/consolidation at Building 71 OPCA. When direct loading of transportation vehicles is not possible, D.A. Collins will stockpile the material in accordance of Section SP-3.29.

Newell Street Area II June 22, 2005

All vehicles used to transport the excavated material from Newell Street to Building 71 OPCA will be lined with polyethylene sheeting (or equivalent) and covered with tarps prior to transport. D.A. Collins will supply a hazardous materials bill of lading and comply with other DOT requirements associated with hazardous materials transport. All the material transported to Building 71 OPCA must pass the Paint Filter Test (USEPA Test Method 9095A).

D.A. Collins will utilize the proposed travel route to Building 71 OPCA as shown in Attachment E of the Technical Specifications unless otherwise authorized or directed.

A written load summary will be maintained by the Superintendent and will be provided to GE at the end of each week.

#### 4.6 Dust Control

D.A. Collins will implement dust control measures in accordance with the requirements of the HASP and/or whenever dust creates a potential community nuisance. In most cases, DAC will utilize a water truck to control dust within the work areas and Newell Street entrance. Additionally, a stabilized construction entrance will be installed at the Newell Street entrance if vehicular tracking of clean soil becomes a problem on public roads.

## 5.0 Engineered Barriers & Surface Restoration

At the completion of the backfill phase, the Engineered Barriers will be installed in accordance with the Technical Drawings and in the Materials and Performance Specifications. As-built survey drawings will provide appropriate field measurements to document that the Engineered Barriers have been installed to the horizontal limits indicated on the Technical Drawings and the desired liner grading and post construction surface topography has been achieved in accordance with the grading plans on the Technical Drawings.

## 5.1 Material Delivery & Laydown

Barrier materials (e.g., liner, fabric, composite) will be delivered and staged onsite prior to installation. The material will be stored in a designated area approved by GE. The liner materials will be stored and protected in accordance with the manufacturers' recommendations.

#### 5.2 Clean Soil & Select Fills

Soil fill will be utilized to achieve desired grades or make other structural fill improvements prior to liner placement. The soil fill will be pre-approved by GE prior to placement. Backfilling within the proposed limits will be performed using traditional earthwork methods. Backfill material will generally

be placed and compacted with a dozer, although a vibratory roller or equivalent maybe necessary to achieve compaction requirements listed in Sections 02200 and 02222 of the Technical Specifications.

### 5.3 Installation Sequence

Installation of the barrier liner will begin after subgrade preparation is complete. Installation of the various layers may be performed concurrently, with lower layers extending further than the upper lays. Due to potential impacts of cold weather, the final schedule and sequence of installation will be determined when the project nears this phase of the work.

### 5.4 Drainage Features

Drainage features such as swales, lateral collection pipes, and drainage anchor trenches will be installed concurrently with the liner construction.

#### 5.5 Manholes

Prior to the placement of the topsoil a mixture of soil fill and powdered Bentonite will be placed around the existing manholes located on the Newell Street Area II property. The soil fill will be uniformly blended with 5 to 10% Bentonite as shown on the Technical Drawings. Bentonite will be provided in granular or powder form and mixed in the field with an excavator or loader until the blend ratio is achieved and approved by GE.

#### 5.6 New Concrete Pads and Collar Construction

D.A. Collins will construct two concrete pads and place concrete collars around existing utility poles and pipe racks as shown in the Technical Drawings. HDPE batten strips will be placed around the pipe racks, utility poles and concrete slabs. HDPE penetration boots will be placed around the fence posts and well caps.

#### 5.7 Barrier Cover & Erosion Control

Soil fill, topsoil, seed and erosion control blankets will be installed as soon as possible during barrier construction. This work will be performed as sufficiently large sections become available. Since this phase of the project is very likely to encounter colder weather, the final schedule and sequence will be subject to modification depending upon weather conditions.

### 6.0 General & Wetland Restoration

#### 6.1 Fence Installation

D.A. Collins will restore portions of the chain link fence that were removed as part of the remedial activities. The fence post will be reinstalled prior to liner installation to allow geosynthetic penetration seal (booting) around the posts. The chain link fence mesh and hardware will be installed after the completion of Engineered Barriers. During fence installation, any soil borings generated during post placement will be raked out over the ground surface and blended into the soil fill layer.

### 6.2 Asphalt Access Road

In addition to the vegetated areas, D.A. Collins will construct the Access Road Engineered Barrier and turn-around within the Newell Street parking lot area as shown on the Technical Drawings and detailed in Section 02600 of the Technical Specification.

### 6.3 Replacement of Site Structures

All site structures (e.g. the trailer, building, and storage shed associated with NAPL collection system) will be relocated to their original location or new locations directed by GE prior to topsoil, seeding and planting. D.A. Collins will coordinate with GE the reinstallation of various components for the NAPL collection system.

## 6.4 Natural Resource and Wetland Restoration Activities

D.A. Collins will implement the following natural resource restoration/enhancement measures within the GE Newell Street parking lot area (at Parecel J9-23-12):

- Plant a variety of herbaceous species that include a mixture of native warm season grass and wildflower species listed in Section 3.38 of the Technical Specifications.
- Place uncontaminated stumps and rock piles throughout the GE Newell Street parking lot area as specified in Attachment G of the Technical Specification.
- Install a bluebird box along the edge of the GE Newell Street parking lot area adjacent to the ricer, as shown on the Technical Drawings.
- Planting a variety of trees and shrubs in accordance with the 5/10/05 Tree Planting Plan (White Engineering Drawing No. 05-04-13).

## 7.0 Demobilization

## 7.1 Site Cleanup & Demobilization

Site cleanup will include the complete removal of the following items:

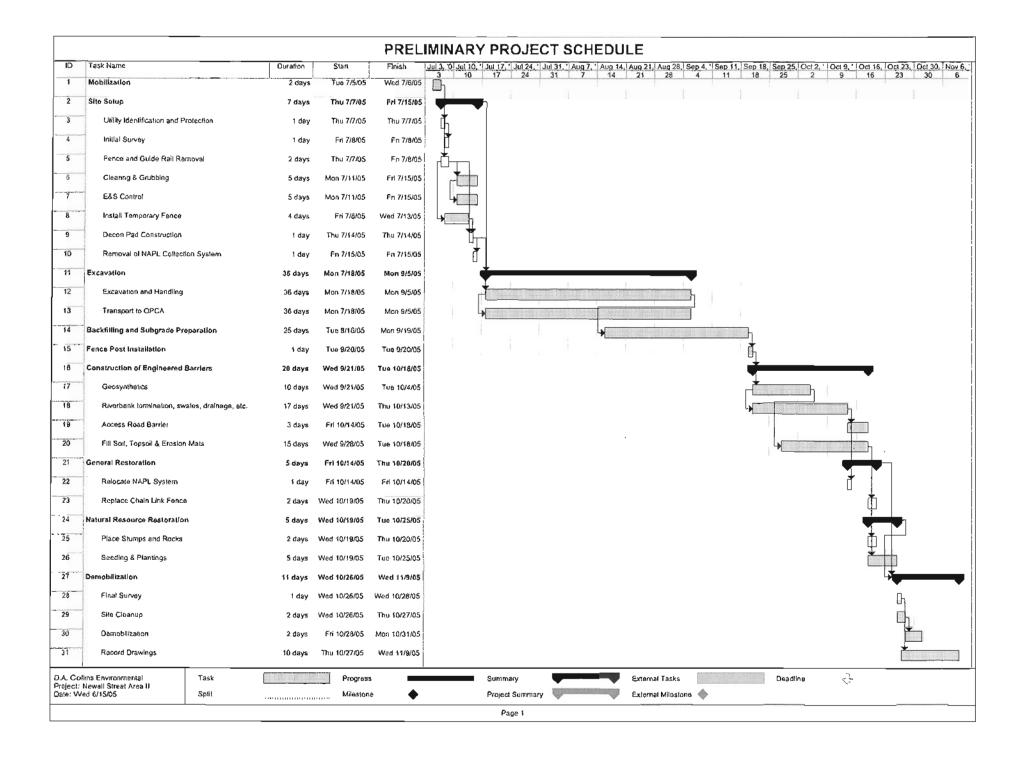
- Erosion controls such as silt fence, hay bales and other materials still remaining on-site, and not needed for further erosion protection.
- Remaining materials, trash, debris, etc.

Contractor's equipment shall be fully decontaminated in accordance with the HASP prior to removal from the site.

## 7.2 Project Closeout & Reporting

Project closeout activities will include the following:

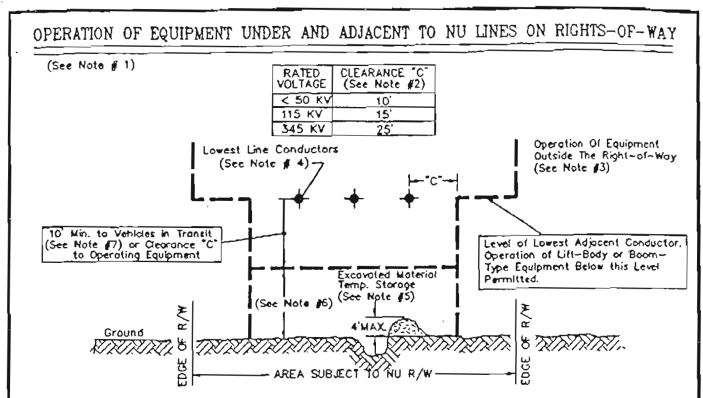
- Final topographic survey
- Project reporting and confirmation of final quantities
- Record Drawings
- A final site walk-thru with the GE to identify any remaining tasks



## Attachment C

Northeast Utilities – Operation of Equipment Under and Adjacent to NU Lines on Rights-of-Way





### NOTES

- 1. PRIOR APPROVAL OF DEVELOPMENT ACTIVITY IN RIGHT-OF-WAY IS REQUIRED.
- 2. NU REQUIREMENT BASED ON OSHA SUBPART "N" SECTION 1926.550 (a) (15) (ii) OTHER STATE STANDARDS MAY ALSO APPLY.
- 3. OPERATION OF LIFT BODY, BOOM-TYPE OR OTHER AERIAL EQUIPMENT OUTSIDE THE RIGHT-OF-WAY SHALL RECOGNIZE THE EXISTENCE OF ANY ENERGIZED CONDUCTORS.

  OPERATION SHALL BE SUCH THAT CLEARANCE "C" IS MAINTAINED AT ALL TIMES INCLUDING CONSIDERATION FOR UNEXPECTED OR ACCIDENTAL CONDITIONS (I.E. CRANE OVERTURN).
- 4. ELEVATION OF CONDUCTORS MAY VARY FROM DAY-TO-DAY, EVEN HOUR-TO-HOUR DEPENDING UPON AIR TEMPERATURE, WIND AND LINE AMPERE LOADING.
- 5. WHERE SPECIFICALLY PERMITTED IN WRITING BY NU, EXCAVATED MATERIAL MAY BE STORED TEMPORARILY AT A HEIGHT NOT TO EXCEED 4 FEET ABOVE ORIGINAL GRADE. NO EQUIPMENT OR VEHICLE OF ANY KIND IS ALLOWED ON EXCAVATED MATERIAL ABOVE ORIGINAL GRADE.
- 6. 13-6" MAXIMUM LEGAL OVER-THE-ROAD VEHICLES MAY RESULT IN A VIOLATION OF OSHA REGULATIONS IN OFF-ROAD AREAS.
- 7. OSHA CONSTRUCTION REGULATIONS SUBPART "N" SECTION 1926.550 (a) (15) (iii).

							NORTHEAST UTILITIES SERVI FOR THE CONNECTICUT UCHT & POWER CONPAN HOLYOKE POWER & ELECTRIC COMPAN WESTERN MASSACHUSETTS ELECTRIC PUBLIC SERVICE COMPANY OF NEW H	). IY CO.
							OPERATION OF EQUIPMENT ON NU RIGHTS-OF-WAY	
$\vdash$	$\vdash$			-	<del>                                     </del>	-	BY R. MINNICH CHKO RM. APP DEH . APP	
2	0/95	NEW DWG#. CAD VERSION	24	xc	υ€Η		DATE 1-30-91 DATE 1-31-91 DATE 2-14-91 DATE	
1	1/91	GENERAL REVISION		JRR			SCALE NTS MICROFILM DATE DVG. NO. 09000-	99001
NO.	DATE	<b>KEVIZIONZ</b>	ΒY	CHK	APP	APP		

## Attachment D

# White Engineering, Inc. – Tree Planting Plan





#### WHITE ENGINEERING INC.

#### CIVIL & ENVIRONMENTAL

May 10, 2005

Mr. Richard Gates General Electric Company 159 Plastics Avenue Building 59 Pittsfield, MA 01201

RE: Tree Inventory/ Restoration Plan for Newell Street Area II RAA

Dear Mr. Gates:

Enclosed pleased find a listing of the tree species and diameters found at the two remediation areas at Newell Street Area II. Also enclosed is a plan showing proposed tree replacement and planting schedule.

As part of our contract I reviewed the west side remediation area for protectable wetland resource areas under state and federal guidelines. The areas highlighted for remediation do fall within the 100-Year Floodplain of the East Branch of the Housatonic River and within the 200-ft Riverfront Area resource area. I determined the area of intermittent standing water to not be protected as a wetland resource area. The following observations led me to this conclusion. The City of Pittsfield storm drain from Newell Street discharges onto this parcel. The discharge flows northwest in a fairly well defined channel to the East Branch of the Housatonic River. Approximately 150-ft southeast of the river a portion of the water from this drainage way enters a low lying area referred to on the plan by BBL as "intermittent Standing Water". There is no outlet from this area. The drainage way, although densely vegetated does not contain greater than 50% wetland plant species. The low lying area has an inlet and does not hold greater than ¼ acre foot to a depth of 6" of water and therefore is not an isolated land subject to flooding. During my three visits to the site I observed the area full of water and dry. There was no evidence of amphibian life or eggs in the water. There by it is believed the area is not a vernal pool.

I hope this information is sufficient to meet your needs. Please contact this office if you require any additional information. As always it is a pleasure working with you.

Sincerely,

Shannon Boomsma
Environmental Analyst

	lue Site
TYPE OF TREE	DIAMETER (INCHES-DBH)
EASTERN COTTONWOOD Populus deltoides	9.1
EASTERN COTTONWOOD Populus deltoides	20.8
BOX ELDER Acer negundo	6
EASTERN COTTONWOOD Populus deltoides	11.1
EASTERN COTTONWOOD Populus deltoides	9.5
EASTERN COTTONWOOD Populus deltoides	13.9
BOX ELDER Acer negundo	7
BOX ELDER Acer negundo	7
BOX ELDER Acer negundo	6.8
BOX ELDER Acer negundo	7.1
BOX ELDER Acer negundo	6.7
EASTERN COTTONWOOD Populus deltoides	25
BOX ELDER Acer negundo	9
BOX ELDER Acer negundo	6.4
EASTERN COTTONWOOD Populus deltoides	16.9
EASTERN COTTONWOOD Populus deltoides	22.3
EASTERN COTTONWOOD Populus deltoides	16.7
EASTERN COTTONWOOD Populus deltoides	27
BOX ELDER Acer negundo	6.5
EASTERN COTTONWOOD Populus deltoides	17.2

lue Site
DIAMETER (INCHES-DBH)
16
13.2
6
8.8
14.1
18.8
27.5
12.4
12
6.7
40
7.4
20.3
7
28
7
10.8
11.1
19
13.1

TYPE OF TREE	DIAMETER (INCHES-DBH)
BOX ELDER Acer negundo	8.2
EASTERN COTTONWOOD Populus deltoides	30
EASTERN COTTONWOOD Populus deltoides	29
EASTERN COTTONWOOD Populus deltoides	18.9
EASTERN COTTONWOOD Populus deltoides	14.6
EASTERN COTTONWOOD Populus deltoides	11.3
EASTERN COTTONWOOD Populus deltoides	18.5
BOX ELDER Acer negundo	7.2
BOX ELDER Acer negundo	9.1
BOX ELDER Acer negundo	9.7
EASTERN COTTONWOOD Populus deltoides	28
CRACK WILLOW Salix fragilis	24
CRACK WILLOW Salix fragilis	26
CRACK WILLOW Salix fragilis	21
CRACK WILLOW Salix fragilis	15.8
CRACK WILLOW Salix fragilis	14.7
BOX ELDER Acer negundo	6.4
EASTERN COTTONWOOD Populus deltoides	5
RED MAPLE Acer rubrum	25
RED MAPLE Acer rubrum	10.5

TYPE OF TREE	DIAMETER (INCHES-DBH)
RED MAPLE Acer rubrum	9
RED MAPLE Acer rubrum	11
BOX ELDER Acer negundo	13
BOX ELDER Acer negundo	6.7
RED MAPLE Acer rubrum	6.3
BOX ELDER Acer negundo	18.6
BOX ELDER Acer negundo	8
RED MAPLE Acer rubrum	8
BOX ELDER Acer negundo	9
BOX ELDER Acer negundo	14.4
BOX ELDER Acer negundo	8.4
BLACK CHERRY Prunus serotina	16.2
BOX ELDER Acer negundo	8
BLACK CHERRY Prunus serotina	24
NORTHERN RED OAK Quercus rubra	6.8
BLACK CHERRY Prunus serotina	13.2
BLACK CHERRY Prunus serotina	8.4
NORTHERN RED OAK Quercus rubra	17.8
BLACK CHERRY Prunus serotina	12.7
BLACK CHERRY Prunus serotina	11

TYPE OF TREE	DIAMETER (INCHES-DBH)
EASTERN COTTONWOOD Populus deltoides	6.3
BLACK CHERRY Prunus serotina	12.4
BOX ELDER Acer negundo	7.3
BOX ELDER Acer negundo	16
BOX ELDER Acer negundo	14
BOX ELDER Acer negundo	6.7
NORTHERN RED OAK Quercus rubra	19.2
BOX ELDER Acer negundo	16.1
BOX ELDER Acer negundo	14.1
RED MAPLE Acer rubrum	13.2
SLIPPERY ELM Ulmas rubra	6.3
RED MAPLE Acer rubrum	11.9
NORTHERN RED OAK Quercus rubra	8
RED MAPLE Acer rubrum	9.4
BOX ELDER Acer negundo	6.5
EASTERN COTTONWOOD Populus deltoides	7
EASTERN COTTONWOOD Populus deltoides	7.1
EASTERN COTTONWOOD Populus deltoldes	8
RED MAPLE Acer rubrum	6
RED MAPLE Acer rubrum	7.4

#### West Side Site

TYPE OF TREE	DIAMETER (INCHES-DBH)
BOX ELDER Acer negundo	7.2
EASTERN COTTONWOOD Populus deltoides	38
BOX ELDER Acer negundo	9.1

West Side Site

Shrubs dominated 2 regions
1.Northwest corner of area at a denisty of 55%.
2. In vicinity of high tension towers at a density of 100%.

Shrubs found on site:
Tartarian Honeysuckle
(Lonicera tartanica)
Lowbush Blueberry (Vaccimium
anqustifolium) Blackberry
(Rubus allegheniensis)
Redosier Dogwood (Cornus
sericea)
Box Elder (Acer negunda)
Blackcherry (Prunus serotina)

East Side Site

TYPE OF TREE	DIAMETER (INCHES-DBH)
APPLE	8.1
BOX ELDER Acer negundo	6.6
BOX ELDER Acer negundo	8.3
BOX ELDER Acer negundo	7.1
EASTERN COTTONWOOD Populus deltoides	17
EASTERN COTTONWOOD Populus deltoides	10.9
EASTERN COTTONWOOD Populus deltoides	11.7
EASTERN COTTONWOOD Populus deltoides	6.5
EASTERN COTTONWOOD Populus deltoides	30
SLIPPERY ELM Ulmas rubra	6.4
EASTERN COTTONWOOD Populus deltoides	19.2
BOX ELDER Acer negundo	6.1
BOX ELDER Acer negundo	8.5
BOX ELDER Acer negundo	7.5
EASTERN COTTONWOOD Populus deltoides	19.9
EASTERN COTTONWOOD Populus deltoides	9.6
BLACK BIRCH Betula lenta	7.4
SLIPPERY ELM Ulmas rubra	6.6
BOX ELDER Acer negundo	14
BÖX ELDER Acer negundo	11.9

East Side Site

Last olde olte	
TYPE OF TREE	DIAMETER (INCHES-DBH)
BOX ELDER Acer negundo	12
BOX ELDER Acer negundo	9.8
BOX ELDER Acer negundo	12.7
BOX ELDER Acer negundo	11.8
BOX ELDER Acer negundo	8
BOX ELDER Acer negundo	10.1
BOX ELDER Acer negundo	11
SLIPPERY ELM Ulmas rubra	6.1
BOX ELDER Acer negundo	6.8
EASTERN COTTONWOOD Populus deltoides	96
BOX ELDER Acer negundo	8
BOX ELDER Acer negundo	8.6
BOX ELDER Acer negundo	11.7
BOX ELDER Acer negundo	8
BOX ELDER Acer negundo	9.1

East Side Site:

Shrubs found on site:

Redosier Dogwood (Cornus sericea) Tatarian Honeysuckle (Lonicera tartanica)

Density 35%

